

A Systematic Catalogue of Australian Braconidae

ARTHUR W. PARROTT¹

INTRODUCTION

IT HAS BEEN 60 YEARS since a list of the Braconidae of Australia was published, excepting the world lists compiled by Dalla Torre (1898) and Szépligeti (1904). In 1891, Froggatt published his "Catalogue of Described Hymenoptera of Australia" in which he lists eight species of braconids. Nine years later Dalla Torre's world catalogue appeared in which he records 28 species from Australia and Tasmania. As far as the Australian fauna is concerned, there are errors and omissions which diminish the value of this great work, and in the present catalogue it is referred to only when the nomenclature of a species is affected. For example, Dalla Torre does not mention Guérin's genus *Trachypectus* and records *Bracon bicolor* Brullé from Africa and *Myosoma mutator* Fabr. from America. The next list was published in Szépligeti's "Genera Insectorum," Parts I and II, which appeared in 1904. While Szépligeti was preparing this work, he was actively engaged in a study of the Australian fauna and thus added greatly to our knowledge of this group. He lists 37 species from Australia and Tasmania. The present list records 224 species from Australia and Tasmania.

Unquestionably the taxonomy of the Braconidae is rather confused. Further studies will undoubtedly result in much more synonymy and in the resurrection of some species and genera now suppressed. The great diversity of species occurring in Australia and neighbouring regions necessitates an enormous

amount of work before a proper arrangement of species and their synonymy can be formulated. The arrangement of the genera and higher groups, in the present catalogue, is substantially that used by Muesebeck (1951: 90-184).

For the majority of species listed, I have had access to the original works, but those that were not available to me I have checked with other authors and in the Zoological Record. In compiling the synonymy of the older species, especially those of Fabricius and Brullé, and of the several more or less cosmopolitan species, a complete bibliography is not given, but invariably the original reference, together with all subsequent references where nomenclature is affected, is included. All references are included when a fuller description or figures are given, or when reference is made to the host or distribution of the species concerned. At the end of the catalogue is a list of beneficial species introduced and liberated for purposes of biological control. Established aliens, accidentally introduced species, and those occurring naturally outside the Australian area are given in the body of the catalogue with an indication of their distribution outside Australia. A host index is included as well as a general index, listing all subfamily, generic, specific, and subspecific names included in the catalogue.

Every endeavour has been made to make this catalogue as complete as possible; nevertheless, there may be omissions, and perpetuations of errors occurring in early records, and subsequent authors' corrections may have been overlooked, but it is hoped that such errors have been reduced to a minimum.

¹ Entomologist, Cawthron Institute, Nelson, New Zealand. Manuscript received March 1, 1952.

HISTORICAL

The history of Australian braconid systematics may be divided conveniently into four major periods of activity, namely, 1777 to 1890, 1891 to 1913, 1914 to 1927, and 1928 to 1951.

First Period 1777-1890.

Australian braconid systematics commenced with the publication of the description of new species by Fabricius in 1777, and was ably carried on by Brullé in 1846. Other workers who described Australian species during this period were Erichson, Guérin-Méneville, and Holmgren. During this period, 15 species were described from Australia and Tasmania. Fabricius worked on the collections made by Banks and Solander, naturalists on the "Endeavour" during Cook's voyages. These early Australian species were collected by Banks and Solander on the return journey of the "Endeavour" to England after observing the transit of Venus at Tahiti. The "Endeavour" was in Australian waters from April to August, 1770, and, according to Musgrave (1930: 190), the insects were mostly captured around Botany Bay and the east coast of Australia. From this material, four species of Braconidae were described, and the types are in the Banksian Collection in the British Museum. It was not until 1824 that the next braconids to be described from Australia were obtained during the voyage of the "Coquille", commanded by L. I. Duperrey. Lessen and Garnot were the naturalists, and the insects were later described by Guérin-Méneville. A footnote (a) by Musgrave (1930: 194) states "In Duperrey's 'Voyage autour du Monde . . . sur . . . La Coquille, pendant les Années 1822-1825.' The plates, with the scientific names of the insects appeared between 1827-1832, but the text did not appear until 1838."

Erichson described a species from Tasmania in 1841. Five years later, Brullé (1846) described eight species from Australia and Tasmania in his great work "Histoire Naturelle des Insects." A specimen collected at Sydney,

New South Wales, was described by the well-known European hymenopterist Holmgren in 1868. No further species were described during this period. Thus, 15 species of braconids were known from Australia and Tasmania to 1890.

Second Period 1891-1913

This period may conveniently begin with the publication of Froggatt's "Catalogue of Described Hymenoptera of Australia," in which he lists eight species of braconids from Australia (actually 15 species were known at this time). During the 22 years covered by this period, Ashmead, Froggatt, Cameron, Szépligeti, Bingham, and Kokujew contributed to the knowledge of the Australian members of this family. Szépligeti, between the years 1901 and 1908, played the most prominent part.

A German expedition collected a number of insects in southwest Australia in 1905 which later were described by specialists in "Die Fauna Südwest-Australiens. 1907-1910," in which Szépligeti (1908) described the Braconidae.

Third Period 1914-1927

The works of R. E. Turner (1917-27) dominate this period, although those of Froggatt, Fullaway, and Baker must be mentioned. The period closes with the publication in 1926 of Baker's work on the Australian and Philippine Cheloninae.

An expedition, headed by Dr. E. Mjöberg, traveled into Queensland and northwest Australia. The Braconidae were described by Roman (1915).

Fourth Period 1928-1951

During this period a great amount of important revisional work was undertaken, principally by Wilkinson, on the Microgasterinae; this work was ably continued by Nixon. These authors dealt with the faunas of large regions and placed the systematics of Australian Braconidae on a sound basis in indicating their relationship with other faunas.

The works of Wilkinson and Nixon in England and Muesebeck in the United States have undoubtedly contributed toward a sounder knowledge of braconid systematics generally, and their work forms a basis for a clearer interpretation of the Australian forms in particular.

Other workers have contributed to the knowledge of the Australian braconid fauna, but those mentioned have made the principal contributions.

ACKNOWLEDGMENTS

To Dr. Leonard Tuthill, Professor of Entomology, University of Hawaii, Honolulu, I want to convey my very sincere thanks for suggestions on the layout of this catalogue; without his kindly co-operation this work would not have been completed.

To Dr. David Miller, Director, and Mr. L. J. Dumbleton, Senior Entomologist, Entomological Research Station, Nelson, New Zealand, my thanks are due for helpful suggestions during the final stages of preparation of this catalogue.

To Miss Shirley Armstrong, Librarian, Entomological Library, Cawthron Institute, Nelson, New Zealand, I am indebted for her untiring efforts in tracing references and obtaining publications.

To Mr. G. E. J. Nixon, British Museum (Natural History), London, Mr. Anthony Musgrave, Entomologist, and Mr. G. Gross, Assistant Entomologist, Australian Museum, Sydney, go my thanks for the literature which they supplied.

To Mr. Frank Wilson, Principal Research Officer, C.S.I.R.O., Canberra, Australia, I am indebted for the list of introduced Braconidae.

To Dr. Rene Malaise, Natural History Museum, Stockholm, my thanks are due for a list of Roman's types and other Australian species in the collections of the Museum.

ABBREVIATIONS OF MUSEUMS

The following abbreviations are used in giving the location of types of Australian Braconidae.

- B.M. British Museum of Natural History, London
- H.D.O.M. Hope Department, Oxford Museum, Oxford.
- H.E.S. Hawaii Entomological Society Collections, Honolulu.
- N.C.A.C. National Collections of Australia, Canberra.
- N.H.M. National Hungarian Museum, Budapest.
- N.H.M.S. Natural History Museum, Sweden.
- N.H.M.V. Natural History Museum, Vienna.
- N.K. Location not known.
- S.C.M.G. Saussure Collection, in Museum, Geneva.
- U.S.N.M. United States National Museum, Washington.

Order HYMENOPTERA

Suborder APOCRITA (= CLISTOGASTRA)
Superfamily ICHNEUMONOIDEA

Family BRACONIDAE

Subfamily APHIDIINAE

All members of this subfamily are internal parasites of aphids.

Genus *DIAERETUS* Foerster, 1862

rapae (Curtis)

Curtis [*Aphidius*] (1855, 2: 194) ♀ descr.

Ashmead [*Lipolexis*] (1900: 353) Austr. record.

Froggatt [*Lepolexis*] (1907: 87) noted.

Cameron [*Lipolexis*] (1912: 197) Austr. record.

Smith (1944: 101) syn., descr., fig.

Loc: Victoria; New South Wales.

Hosts: *Rhopalosiphum pseudobrassicae* (Davis).

Mysus persicae (Sulz).

Brevicoryne brassicae (Linn.).

Type: N.K.

Note: This European species is now well established in at least the southern

states of Australia and also in New Zealand.

Genus **EPHEDRUS** Haliday, 1833

persicae Froggatt

Froggatt (1904: 611) ♀ descr.

Froggatt (1907: 86) note, fig.

Froggatt (1910: 342) host, fig.

Loc: New South Wales.

Host: Peach aphid.

Type: N.K.

Note: This species is probably a European species that has become established in Australia.

Subfamily **EUPHORINAE**

(= *Meteorinae*)

The members of this subfamily attack a wide range of hosts, but all species are internal parasites.

Genus **ARIDELUS** Marshall, 1887

(= *Helorimorpha* Schmied., 1907)

exiles (Turner)

Turner [*Helorimorpha*] (1927: 558) ♂ descr.

Loc: Mackay, Queensland.

Type: B.M.

Genus **METEORUS** Haliday, 1835

(= *Protelus* Foerster, 1862)

. Most species of this genus are parasitic on lepidopterous larvae, but some are known to parasitise Coleoptera.

antipodalis Ashmead

Ashmead (1900: 353) ♀ descr.

Loc.: New South Wales.

Type: U.S.N.M. (No. 4908).

bicolor Szépligeti

Szépligeti (1905: 53) ♀ descr.

Loc: New South Wales.

Type: N.H.M.

dumbletoni Muesebeck

Muesebeck (1939: 172) ♂ ♀ descr.

Dumbleton (1940: 325a) host, biol., distr.

Loc: Hobart, Tasmania.

Host: *Tortrix postvittana* Walk.

Type: U.S.N.M. (No. 53341).

lutens (Cameron)

Cameron [*Protelus*] (1911: 341) ♀ descr.

Loc: Sydney, New South Wales.

Host: *Teara* sp. [Notodontid.].

Type: B.M.

Genus **PERILITUS** Nees, 1818

(= *Dinocampus* Foerster, 1862)

The species of this genus are internal parasites of adult Coleoptera.

coccinellae (Schränk)

Schränk [*Ichneumon*] (1802, 2: 310) ♀ descr.

Nees [*Bracon terminatus*] (1811: 26) ♀ descr.

Nees [*Perilitus terminatus*] (1834: 30) ♂ ♀ descr.

Dalla Torre (1898: 122) listed.

Szépligeti [*Dinocampus terminatus*] (1904: 175) listed.

Timberlake [*D. terminatus*] (1918: 401) Austr. record.

Cushman [*Dinocampus*] (1922: 242) syn.

Muesebeck (1951: 101) syn., listed.

Loc: Queensland. This species is nearly cosmopolitan.

Hosts: *Hippodamia convergens* Guer.

H. 5-signata (Kby.).

Coccinella californica Mann.

Coleomegilla maculata (Deg.).

Cycloneda sanguinea (L.).

C. trifasciata juliana Muls.

Type: N.K.

Subfamily **MACROCENTRINAE**

Internal parasites of lepidopterous larvae. The gregarious forms seem to be polyembryonic.

Genus **MACROCENTRUS** Curtis, 1833

(= *Amicroplus* Foerster, 1862)

(= *Fhogra* Cameron, 1901a)

ancylicivorus Rohwer

Rohwer (1923: 56) ♀ descr., N. America.

Loc: Liberated in Goulburn Valley, Victoria.

Host: *Grapholitha molesta*, Busck. [Olethreutid.].

Type: U.S.N.M.

rubromaculatus (Cameron)

Cameron [*Fhogra*] (1901b: 104) descr., New Zealand.

Wilkinson [*Amicroplus tasmanicus*] (1928b: 265) descr. [New synonymy].

Loc: New Zealand; Longford, Tasmania.

Host: *Argotis* sp. (or allied Noctuid).

Type: B.M.

Subfamily **HELCONINAE**

The species of this subfamily, with few exceptions, appear to be parasitic on wood-boring coleopterous larvae.

Tribe **HELCONINI**

Genus **AUSTROHELCON** Turner, 1918

australiensis (Kokujew)

Kokujew [*Helcon*] (1901: 15) ♂ descr.

Szépligeti [*Aspidocolpus*] (1904: 152) listed.

Turner (1918d: 165) nomencl., note.

Loc: Tasmania (Kokujew); New South Wales (Turner).

Type: N.K.

erythrocephalus Turner

Turner (1918d: 167) ♂ descr.

Loc: Victoria.

Type: B.M.

indultor (Erichson)

Erichson [*Helcon*] (1842: 258) ♂ descr.

Dalla Torre [*Helcon*] (1898: 84) listed.

Szépligeti [*Helcon*] (1904: 151) listed.

Turner (1918d: 165) nomencl., note.

Loc: Tasmania.

Type: N.K.

inornatus (Kokujew)

Kokujew [*Helcon*] (1902: 15) ♂ descr.

Szépligeti [*Aspidocolpus*] (1904: 152) listed.

Turner (1918d: 165) nomencl., note.

Loc: Australia.

Type: N.K.

meridionalis Turner

Turner (1918d: 167) descr.

Loc: Victoria.

Type: B.M.

Genus **CALOHELCON** Turner, 1918

obscuripennis Turner

Turner (1918d: 165) descr.

Loc: Victoria.

Type: B.M.

Genus **HELCON** Nees, 1814 (1812)

(= *Gymnoscelus* Foerster, 1862)

rufithorax Turner

Turner [*Gymnoscelus*] (1918d: 170) descr.

Loc: Victoria.

Type: B.M.

rufoniges Turner

Turner [*Gymnoscelus*] (1918d: 169) descr.

Loc: Tasmania.

Type: B.M.

Genus **PARAHELCON** Kokujew, 1901

konowi Kokujew

Kokujew (1901: 15) ♀ descr., n. gen.

Cameron [*Opius euthyrrhini*] (1912: 197) ♀ descr., host.

Loc: New South Wales, Australia.

Host: *Euthyrrhinus mediatubundus* Fabr. (palm weevil).

Type: N.K.; Cameron's type, B.M.

Genus **TRICHIOHELCON** Turner, 1818

phoracanthae (Froggatt)

Froggatt [*Ipbiaulax*] (1916: 565) ♀ descr., fig.

Froggatt [*Ipbiaulax*] (1923: 42) descr., fig., host.

Turner (1918d: 168) nomencl., note.

Loc: S. E. Australia; Tasmania.

Host: *Trogodendron fasciculatum* Schreiber (Clerid.).

Genus **TRACHYPETUS** Guérin, 1838

The true position of this genus is doubtful; it was placed in the subfamily Cheloninae by Szépligeti (1904: 99), but Brues transferred it to the Helconinae.

clavatus Guérin

Guérin (1830: 201) ♂ descr., fig.

Schulz (1911: 85) noted.

Brues (1920: 59) nomencl.

Loc: New South Wales, Queensland.

Type: N.K.

Tribe DIOSPILINI

Genus *DIOSPILUS* Haliday, 1833*ruficeps* Szépligeti

Szépligeti (1905: 14) descr.

Loc: New South Wales.

Type: N.H.M.

Genus *WESTWOODIELLA* Szépligeti, 1904*bicolor* Szépligeti

Szépligeti (1904: 155) ♀ descr.

Loc: Sydney, New South Wales.

ruficeps (Brullé)Brullé [*Westwoodia*] (1846: 127) descr., fig.

Loc: Tasmania.

Type: N.K.

Tribe ZELINI

This tribe has previously been placed in the Macrocentrinae, but I have followed Muesebeck (1951: 111) in placing it in the *Helconinae*.

Genus *ZELE* Curtis, 1832*australiensis* Nixon

Nixon (1938: 419) ♀ descr.

Loc: Mackay, Queensland.

Type: B.M.

Subfamily *BLACINAE*Genus *ORGILONEURA* Ashmead, 1900*antipoda* Ashmead

Ashmead (1900: 355) ♀ descr.

Loc: Australia.

Type: U.S.N.M. (No. 4910).

Genus *ORGILUS* Haliday, 1833(= *Ischius* Wesmael, 1837)*leucogaster* (Holmgren)Holmgren [*Ischiu*] (1868: 429) ♂ descr.Froggatt [*Ischiu*] (1890: 713) listed.

Dalla Torre (1898: 128) listed.

Szépligeti (1904: 120) listed.

Loc: Sydney, New South Wales.

Type: N.H.M.S.

Subfamily *AGATHIDINAE*

As far as is known, all species of this subfamily are internal parasites of lepidopterous larvae.

Genus *AGATHIELLA* Szépligeti, 1902*festinata* Turner

Turner (1918a: 111) ♀ descr., key.

Loc: South Australia.

Type: B.M.

latibalteata (Cameron)Cameron [*Agathis*] (1906: 26) ♂ descr.

Turner (1918a: 110) note., nomencl., key.

Loc: Australia.

Type: B.M.

maligna Turner

Turner (1918a: 112) ♀ descr., key.

Loc: S.W. Australia.

Type: B.M.

meridionalis Turner

Turner (1918a: 110) ♀ descr., key.

Dumbleton (1940: 325a) host.

Loc: Mt. Wellington, Tasmania.

Host: *Tortrix postvittana* Walk. (Tortricid.).

Type: B.M.

minima Turner

Turner (1918a: 113) ♀ descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

Note: "It is possible that Ashmead's genus *Orgiloneura* may be founded on a species of this genus, with somewhat reduced neururation, but his description is too short for any conclusions to be drawn." (Turner 1918a: 113).

ruficeps Szépligeti

Szépligeti (1905: 52) ♂ descr.

Turner (1918a: 110) note, key.

Loc: Sydney, New South Wales.

Type: N.H.M.

rugosa Turner

Turner (1918a: 112) ♂ ♀ descr., key.

Loc: Tasmania.

Type: B.M.

tenuissima Turner

Turner (1918a: 111) ♀ descr., key.

Loc: Victoria.

Type: B.M.

Note: Possibly a female of *A. ruficeps* Szépl. (Turner).

tricolor Szépligeti

Szépligeti (1905: 52) ♀ descr.

Turner (1918a: 110) note, key.

Loc: Sydney, New South Wales.

Type: N.H.M.

unimaculata Turner

Turner (1918a: 111) ♂ descr., key.

Loc: Kuranda, Queensland; Sydney, New South Wales.

Genus **AGATHIS** Latreille, 1804

(= *Bassus* Fabr., 1804)

(= *Microdus* Nees, 1814)

The two species described by Brullé in 1849 are listed under this genus, but it is doubtful whether they are typical *Agathis*. In 1918 Turner (p. 110) stated "as far as I am aware typical *Agathis* does not occur in Australia." Brullé's species may probably belong to *Agathiella* Szépl. Muesebeck (1951: 117) synonymises *Microdus* Nees, 1814 (1812) with *Agathis* Latr., 1804, and the four species described by Turner under *Microdus* are listed here under Latreille's genus.

bicolor Brullé

Brullé (1846:483) descr.

Froggatt (1890: 710) listed.

Loc: Australia.

Type: N.K.

dimidiata Brullé

Brullé (1846: 487) descr.

Froggatt (1890: 710) listed.

Loc: Tasmania.

Type: N.K.

martialis (Turner)

Turner [*Microdus*] (1918a: 108) ♂ ♀ descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

pedunculatus Szépligeti

Szépligeti (1905: 51) ♀ descr.

Turner (1918a: 106) note.

Loc: Sydney, New South Wales.

Type: N.H.M.

rufithorax (Turner)

Turner [*Microdus*] (1918a: 106) ♀ descr., key.

Loc: Kalamunda, Yallingup, S.W. Australia.

Type: B.M.

rufobrunneus (Turner)

Turner [*Microdus*] (1918a: 106) ♀ descr., key.

Loc: Townsville, Queensland.

Type: B.M.

xanthopsis (Turner)

Turner [*Microdus*] (1918a: 107) ♂ ♀ descr., key.

Loc: Yallingup, S.W. Australia.

Type: B.M.

Genus **BIROIA** Szépligeti, 1900

solitaria Turner

Turner (1918c: 229) ♂ ♀ descr.

Loc: Mackay, Queensland.

Type: B.M.

Genus **BRAUNSLIA** Kriechbaumer, 1894

bicolor Brullé

Brullé (1846: 483) ♀ descr.

Dalla Torre [*Agathis*] (1898: 138) listed.

Loc: Australia.

Type: N.K.

diversipennis Turner

Turner (1918c: 224) ♂ descr.

Loc: Mackay, Queensland.

Type: B.M.

Genus **CREMNOPS** Foerster, 1862

(= *Bracon* Auct. not of Fabricius. See Opinion 162 of the Internatl. Comm. on Zool. Nomencl. 1945.)

commutator Turner

Turner (1918c: 223) ♀ descr., key.

Loc: Mackay, Queensland (Type), Kuranda, Townsville, Queensland; Port Darwin, Northern Territory.

Type: B.M.

dissimilis Turner

Turner (1918c: 222) ♂ ♀ descr., key.

Loc: Mackay, Queensland.

Type: B.M.

marginipennis Turner

Turner (1918c: 222) ♂ ♀ descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

xanthostigma Szépligeti

Szépligeti (1900: 61) ♀ descr.

Turner (1918c: 221) note.

Loc: Kuranda, Mackay, Queensland; also New Guinea.

Type: N.H.M.

Genus **DISOPHRYS** Foerster, 1862

diluta Turner

Turner (1918c: 228) ♀ descr., key.

Loc: Mackay (type), Kuranda, Queensland.

Type: B.M.

diversipes Turner

Turner (1918c: 227) ♀ descr., key.

Loc: Kuranda (type), Mackay, Queensland.

Type: B.M.

exornata Turner

Turner (1918c: 227) ♀ descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

nigropectus Turner

Turner (1918c: 229) ♀ descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

ruberrima Turner

Turner (1918c: 226) ♀ descr., key.

Loc: Mackay (type), Townsville, Queensland.

Type: B.M.

rufifrons Turner

Turner (1918c: 226) ♀ descr., key.

Loc: Port Essington, Northern Territory.

Type: B.M.

signatipennis Turner

Turner (1918c: 225) ♂ descr.

Loc: Kuranda, Queensland.

Type: B.M.

similipicta Turner

Turner (1918c: 228) ♀ descr., key.

Loc: Mackay (type) Townsville, Queensland.

Type: B.M.

Genus **PLATYAGATHIS** Turner, 1918

leaena Turner

Turner (1918a: 114) ♂ ♀ descr., new genus.

Loc: Yallingup, S.W. Australia.

Type: B.M.

Subfamily **MICROGASTERINAE**

All the species of this subfamily appear to be internal parasites of lepidopterous larvae.

Genus **ADELIUS** Haliday, 1833

australiensis (Ashmead)

Ashmead [*Acoelius*] (1900: 358) ♀ descr.

Loc: Australia.

Type: U.S.N.M. (No. 4911).

Genus **APANTELES** Foerster, 1862

anthelae Wilkinson

Wilkinson (1932a: 335) ♂ ♀ descr., key.

Loc: Victoria.

Host: *Anthela ocellata* Walker (Anthelid.).

Type: B.M.

australiensis Ashmead

Ashmead (1900: 356) ♀ descr.

Wilkinson (1930: 485) host.

Wilkinson (1932a: 334) key.

Loc: New South Wales, Victoria.

Host: *Antheraea eucalypti* Scott (Saturniid.).

Type: U.S.N.M. (No. 4931).

biroi Szépligeti

Szépligeti (1905: 49) descr.

Wilkinson (1928: 121) ♂ ♀ descr., key.

Wilkinson (1932a: 337) key.

Loc: Sydney, New South Wales.

Type: N.H.M.

deliadis Bingham

Bingham (1906: 125) ♂ ♀ descr., host.

Wilkinson (1932a: 334) ♂ ♀ descr., key.

Loc: Townsville, Queensland.

Host: *Delias argentihona* Fabr. (Pierid.).

Type: H.D.O.M.

flavipes (Cameron)

Cameron [*Cotesia*] (1891: 185) descr.

Olliff [*Apanteles nonagriæ*] (1893: 381) descr., fig.

- Wilkinson (1928a: 93) ♂ ♀ descr.
 Wilkinson [*A. nonagriæ*] (1928a: 136) descr.
 Wilkinson (1929a: 108) descr.
 Wilkinson (1932: 337) key.
 Wilkinson (1934b: 156) key.
 Loc: Australia; also India and Formosa.
 Host: *Phragmatiphila truncata* Walk. (Noctuid.).
 Type: B.M.
- glomeratus** (Linnaeus)
 Linnaeus [*Ichneumon*] (1758: 568) descr.
 Wilkinson (1932a: 334) key.
 Loc: Nearly cosmopolitan; introduced into Australia.
 Hosts: *Pieris rapæ* (Linn.) (Pierid.).
P. brassicae (Linn.) (Pierid.).
 Type: N.K.
- guyanensis** Cameron
 Cameron (1911: 327) ♂ ♀ descr.
 Wilkinson (1930: 483) host., key.
 Loc: Western Australia; also British Guiana.
 Host: Probably *Utsthesia pulchella* Lis. (Arctiid.).
 Type: B.M.
- philoeampus** Cameron
 Cameron (1911: 342) ♀ descr.
 Wilkinson (1928c: 96) descr.
 Wilkinson (1932a: 333) key.
 Loc: Wattle Flat, New South Wales.
 Type: B.M.
- radiantis** Wilkinson
 Wilkinson (1929a: 110) ♂ ♀ descr., host.
 Wilkinson (1932a: 334) key.
 Loc: Gatton, Queensland.
 Host: *Euxoa radians* Guen. (Noctuid.).
 Type: B.M.
- rubecula** Marshall
 Marshall (1885: 175) ♀ descr.
 Marshall (1889: 420) ♀ descr.
 Wilkinson (1932a: 334) key, Austr. record.
 Loc: Europe; Australia; New Zealand.
 Host: *Pieris rapæ* Linn. (Pierid.).
 Type: N.K.
- ruficrus** (Haliday)
 Haliday [*Microgaster*] (1835: 253) ♂ ♀ descr.
- Ashmead [*Apanteles antipoda*] (1900: 355) ♂ ♀ descr., host.
 Tryon (1900: 142) descr., host fig.
 Cameron [*A. sydneyensis*] (1911: 342) ♀ descr., host.
 Viereck [*A. narangæ*] (1913: 642) descr.
 Wilkinson [*A. antipoda*] (1928: 95) descr.
 Gahan (1928: 256) syn.
 Wilkinson (1929b: 108) note, syn.
 Wilkinson (1932: 333) syn., key.
 Loc: Nearly cosmopolitan; Queensland; New South Wales.
 Hosts: *Heliothis armigera* Hubn. (Noctuid.).
Agrotis sp. (Ashmead) (Noctuid.).
Plusia sp.? (Cameron) (Noctuid.).
Leucania unipuncta Haworth (Noctuid.).
 Type: N.K. (type *A. antipoda* Ash., U.S.N.M. No. 4912).
- rufiventris** (Bingham)
 Bingham [*Protapanteles*] (1906: 127) ♂ ♀ descr., host.
 Wilkinson (1932a: 335) key, host.
 Loc: Townsville, Queensland.
 Type: H.D.O.M.
 Host: *Ogyris genoveve* How. (Lycaenid.).
- sicarius** Marshall
 Marshall (1885: 209) ♂ ♀ descr.
 Wilkinson (1932a: 337) key.
- tasmanica** Cameron
 Cameron (1912: 196) ♀ descr.
 Wilkinson (1932a: 337) ♂ ♀ key.
 Dumbleton (1940: 325a) host, N. Z. record.
 Dumbleton (1935: 572) host, biol., fig.
 Loc: Tasmania; New Zealand.
 Type: B.M.
 Host: *Tortrix postvittana* Walk. (Tortricid.).
- Genus MICROGASTER Latreille, 1804
- magnifica** Wilkinson
 Wilkinson (1929a: 120) ♂ ♀ descr., key.
 Loc: Queensland.
 Type: B.M.
- morata** Wilkinson

- Wilkinson (1929a: 106) ♂ ♀ descr., key.
 Loc: Victoria.
 Host: *Thyridopteryx herrichi* Westr. (Psychid.).
 Type: B.M.
- perniciosa** Wilkinson
 Wilkinson (1929a: 112) ♀ descr., key.
 Loc: Victoria.
 Type: B.M.
- petiolaris** Szépligeti
 Szépligeti (1905: 48) ♂ ♀ descr.
 Wilkinson (1929a: 104) ♂ ♀ descr., key.
 Loc: New South Wales.
 Type: N.H.M.
- resplendens** Wilkinson
 Wilkinson (1929a: 106) ♀ descr., key.
 Loc: Mt. Wellington, Tasmania (2,000 ft.).
 Type: B.M.
- rixosa** Wilkinson
 Wilkinson (1929a: 108) ♂ ♀ descr., key.
 Loc: New South Wales.
 Type: B.M.
- sons** Wilkinson
 Wilkinson (1932b: 87) descr., fig.
 Loc: Brindabella, A.C.T.
 Type: N.C.A.
- tearae** Wilkinson
 Wilkinson (1929a: 107) ♀ descr., key., host.
 Loc: Australia.
 Host: *Teara tristis* Lewin (Notodontid.).
 Type: B.M.
- tegularis** Szépligeti
 Szépligeti (1905: 49) ♂ descr.
 Wilkinson (1928a: 105) ♂ descr., key.
 Loc: New South Wales.
 Type: N.H.M.
- vulpina** Wilkinson
 Wilkinson (1929a: 109) ♂ ♀ descr., key.
 Loc: Victoria.
 Type: B.M.

Genus **MICROPLITIS** Foerster, 1862

- basalis** (Bingham)
 Bingham [*Microgaster*] (1906: 125) ♂ descr.
 Dodd [*Microgaster*] (1906: 120) host.
 Wilkinson (1929a: 122) ♂ ♀ descr.

- Wilkinson (1930a: 24) host.
 Loc: Queensland.
 Host: *Theratra oldenlandiae* Walk.
 Type: H.D.O.M.
- demolitor** Wilkinson
 Wilkinson (1934a: 119) ♂ ♀ descr., host.
 Loc: Stanthorpe, Queensland.
 Hosts: *Heliothis obsoleta* Fabr. (Noctuid.).
H. armigera Hubn. (Noctuid.).
 Type: B.M.
- perelegans** (Bingham)
 Bingham [*Microgaster*] (1906: 126) ♂ ♀ descr.
 Dodd [*Microgaster*] (1906: 120) host.
 Wilkinson (1929a: 122).
 Wilkinson (1930a: 24) host.
 Loc: North Queensland.
 Host: *Pheressaces cynoptera* Lowes (Notodontid.).
 Type: H.D.O.M.

Subfamily **CARDIOCHILINAE**

There are no host records from Australia, but, from the few host records available from other countries, the species of this family apparently parasites lepidopterous larvae.

Genus **CARDIOCHILES** Nees, 1818

- assimilator** Turner
 Turner (1918b: 49) ♂ ♀ descr.
 Loc: Kuranda, Mackay, Queensland.
 Type: B.M.
- dissimulator** Turner
 Turner (1918b: 50) ♀ descr., key.
 Loc: Thursday Island, Queensland.
 Type: B.M.
- rufator** Romans
 Romans (1915: 17) ♀ descr.
 Loc: Kimberley, N.W. Australia.
 Type: N.H.M.S.
- uniformis** Turner
 Turner (1918b: 51) ♂ ♀ descr., key.
 Loc: Mackay, Queensland.
 Type: B.M.
- verticalis** Turner
 Turner (1918b: 51) ♀ descr.
 Loc: Mackay, Queensland.

Type: B.M.

Subfamily *CHELONINAE*

Parasites of lepidopterous larvae. Eggs are laid in eggs of the hosts but the larvae of the parasite do not become mature until the hosts have reached maturity.

Genus *ASCOGASTER* Wesmael, 1835

abdominalis Szépligeti

Szépligeti (1908b: 319) ♀ descr.

Loc: S.W. Australia.

Type: N.H.M.

antennalis Szépligeti

Szépligeti (1908b: 319) descr.

Loc: S.W. Australia.

Type: N.H.M.

australiensis Szépligeti

Szépligeti (1905: 47) descr.

Loc: S.W. Australia.

Type: N.H.M.

caudata Szépligeti

Szépligeti (1905: 46) descr.

Loc: Australia.

Type: N.H.M.

cinctus Baker

Baker (1926: 477) ♀ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

detectus Baker

Baker (1926: 478) ♂ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

distinctus Baker

Baker (1926: 481) ♀ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

erythropus Cameron

Cameron [*Areogaster*] (1911: 340) ♀ descr.

Loc: Mittagong, New South Wales.

Type: B.M.

Note: *Areogaster*, which occurs in Cameron, 1911, is an evident typographical error for *Ascogaster*.

intensus Baker

Baker (1926: 473) ♂ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

laeviventris Baker

Baker (1926: 475) ♀ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

maculaticeps Baker

Baker (1926: 482) ♂ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

modestus Baker

Baker (1926: 474) ♀ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

palpalis Szépligeti

Szépligeti (1905: 46) descr.

Loc: Australia.

Type: N.H.M.

regularis Szépligeti

Szépligeti (1905: 46) descr.

Loc: Australia.

Type: N.H.M.

tricolor Szépligeti

Szépligeti (1905: 46) descr.

Loc: Mt. Victoria, New South Wales.

Type: N.H.M.

vividus Baker

Baker (1926: 479) ♂ descr., key.

Loc: New South Wales.

Type: U.S.N.M.

Genus *CHELONUS* Panzer, 1806

australiensis Szépligeti

Szépligeti (1905: 46) descr.

Loc: New South Wales.

Type: N.H.M.

coriaceus Szépligeti

Szépligeti (1905: 45) descr.

Loc: New South Wales.

Type: N.H.M.

megaspilus Cameron

Cameron (1911: 341) ♀ descr.

Loc: Tamworth, New South Wales.

Type: B.M.

similis Szépligeti

Szépligeti (1905: 44) descr.

Loc: New South Wales.

Type: N.H.M.

unimaculatus Szépligeti

Szépligeti (1905: 45) descr.

Loc: New South Wales.

Type: N.H.M.

Genus **PHANEROTOMA** Wesmael, 1838**australiensis** Ashmead

Ashmead (1900: 354) ♀ descr.

Roman (1915: 17) ♂ descr., noted.

Loc: Broome, W. Australia (Roman).

Type: U.S.N.M. (No. 4904).

leeuwinensis Turner

Turner (1917: 247) descr.

Loc: Australia.

Type: B.M.

Genus **SIGALPHUS** Latreille, 1802**conjugator** (Turner)Turner [*Sphaeropyx*] (1917: 245) descr.

Loc: Australia.

Type: B.M.

tripartitus Szépligeti

Szépligeti (1905: 43) descr.

Loc: New South Wales.

Type: N.H.M.

Subfamily **OPIINAE**

The species of this subfamily are, with few if any exceptions, parasitic on Diptera. Some species are important in the biological control of fruit-flies.

Genus **OPIUS** Wesmael, 1835

Refer to Muesebeck (1951: 153) for the generic synonymy.

albimanus Szépligeti

Szépligeti (1905: 54) descr.

Loc: New South Wales.

Type: N.H.M.

brevicaudis Szépligeti

Szépligeti (1905: 25) descr.

Loc: New South Wales.

Type: N.H.M.

carpocapsae (Ashmead)Ashmead [*Diachasma*] (1900: 357) descr.Szépligeti [*Diachasma*] (1904: 162) listed.

Loc: New South Wales; New Zealand.

Host: Probably *Dacus tryoni* (Froggatt) (Trypetid.).

Type: U.S.N.M. (No. 4914).

deeralensis Fullaway

Fullaway (1950: 65) descr., host.

Fullaway (1951: 244) note.

Loc: Deeral, Queensland.

Host: *Dacus laticaudus* Hardy.

Type: H.E.S.

fijiensis Fullaway

Fullaway (1950: 67) ♂ ♀ descr., host, recorded Australia.

Fullaway (1951: 244) descr., host.

Loc: Australia; Fiji; New Caledonia.

Host: *Dacus* sp.

Type: H.E.S.

froggatti Fullaway

Fullaway (1950: 67) descr., host.

Fullaway (1951: 250) note.

Loc: Deeral, Queensland; Atherton Tableland.

Host: *Dacus* sp.

Type: H.E.S.

kraussi Fullaway

Fullaway (1951: 249) ♂ ♀ descr., host.

Loc: Deeral, Queensland.

Host: *Dacus laticaudus* Hardy.

Type: H.E.S.

Note: Reared in Hawaii from fruit-fly pupae collected in Australia.

perkinsi Fullaway

Fullaway (1950: 66) descr., host.

Fullaway (1951: 244) listed, host.

Loc: Deeral, Queensland.

Host: *Dacus laticaudus* Hardy.

Type: H.E.S.

persulcatus (Silvestri)Silvestri [*Biosteres*] (1916: 167) descr.

Fullaway (1950: 67) note, Australian record.

Loc: Australia.

Host: *Dacus* sp.

Type: N.K.

tryoni Cameron

Cameron (1911: 343) ♂ descr.

Gurney and Gallard (1910: 428) noted, fig

Fullaway (1951: 243) noted, host.

Loc: New South Wales.

Hosts: *Dacus laticaudus* Hardy (Trypetid.).
Dacus ferrugineus Fabr. (Trypetid.).
Ceratitis capitata Wied. (Trypetid.).
 Type: B.M.

Subfamily *BRACONINAE*
 (= *Vipioninae* Vier.)

The members of this subfamily have a wide variety of hosts, many of which are important pests. Although Thomson's genus *Ipobracon* is closely related to, and considered by some authors to be synonymous with, Foerster's genus *Iphiaulax*. I am at present retaining the identity of *Ipobracon*.

Genus *ATANYCOLUS* Foerster, 1862

tomentosus Szépligeti
 Szépligeti (1905: 25) descr.
 Loc: Queensland.
 Type: N.H.M.

Genus *BRACON* Fabricius, 1804-05

Froggatt (1916: 561) describes a species of *Bracon* reared from *Lyctus brunneus* infesting tea chests that were imported from India.

australasicus Cameron
 Cameron (1912: 193) ♀ descr.
 Loc: Australia.
 Type: B.M.

australiensis Szépligeti
 Szépligeti (1905: 38) descr.
 Loc: Australia.
 Type: N.H.M.

bimaculatus Szépligeti
 Szépligeti (1905: 38) descr.
 Loc: Australia.
 Type: B.H.M.

bimaris Turner
 Turner (1918a: 93) ♀ descr.
 Loc: Tasmania.
 Type: B.M.

capitator (Fabricius)
 Fabricius [*Ichneumon*] (1775: 335) ♀ descr.
 Fabricius (1804: 108) descr.
 Dalla Torre (1898: 261) listed.
 Szépligeti (1904: 37) listed.
 Loc: Australia.

Type: B.M.
defensor (Fabricius)
 Fabricius [*Ichneumon*] (1775: 335) ♀ descr.
 Fabricius (1804: 108) descr.
 Dalla Torre (1898: 262) listed.
 Szépligeti (1904: 37) listed.
 Loc: Australia.
 Type: B.M.

eucalypti Cameron
 Cameron (1911: 340) ♂ ♀ descr.
 Loc: Sydney, New South Wales.
 Type: B.M.
 Note: Bred from reddish galls on leaves of eucalyptus.

froggatti Cameron
 Cameron (1911: 339) ♀ descr.
 Loc: Reedy Creek, near Inverell, New South Wales.
 Type: B.M.

hartmeyeri Szépligeti
 Szépligeti (1908: 317) descr.
 Loc: S.W. Australia.
 Type: N.H.M.

hebetor Say
 Say (1836: 252) ♂ ♀ descr.
 Kirby [*as brevicornis*] (1884: 31) descr.
 Marshall [*as brevicornis*] (1885: 24) descr.
 Ashmead [*as juglandis*] (1888: 621) descr.
 Johnston [*Macrobracon*] (1895: 324)
 Froggatt (1912: 310) descr., fig., host.
 Myers [*Microbracon*] (1929: 425) recorded, host.
 Loc: Nearly cosmopolitan; Australia.
 Hosts: *Plodia interpunctella* Huebner.
Ephestia kuehniella Zeller.
Ephestia elutella Huebner.
Galleria mellonella Linnaeus.
 Type: *hebetor*, lost; *juglandis*, U.S.N.M.

hospitator Fabricius
 Fabricius [*Ichneumon*] (1775: 335) descr.
 Fabricius (1804: 106) descr.
 Dalla Torre [*B. arvensis*] (1898: 37) listed.
 Szépligeti (1904: 37) listed.
 Loc: Australia.
 Type: B.M.
levisulcatus Cameron
 Cameron (1912: 194) ♂ descr.

- Loc: Reedy Creek, Inverell, New South Wales.
 Type: B.M.
- pilitarsis** Cameron
 Cameron (1912: 193) ♀ descr.
 Loc: Reedy Creek, Inverell, New South Wales.
 Type: B.M.
- pulchellus** Brullé
 Brullé (1846: 432) descr.
 Froggatt (1890: 713) listed.
 Dalla Torre (1898: 285) listed.
 Szépligeti (1904: 37) listed.
 Loc: Australia.
 Type: N.K.
- thalpocharis** Ashmead
 Ashmead (1900: 359) ♂ ♀ descr.
 Szépligeti [*B. talpocharis*] (1904: 46) listed [error in spelling].
 Froggatt [*Microbracon thalpocaris*] (1907: 87) descr.
 Loc: Australia.
 Host: *Thalpocharis coccophaga* Walker.
 Type: U.S.N.M. (No. 4915).
- tricolor** Ashmead
 Ashmead [*Microbracon*] (1900: 359) ♀ descr.
 Szépligeti (1904: 46) listed.
 Loc: Australia.
 Type: U.S.N.M. (No. 4916).
- turneri** Cameron
 Cameron (1906: 26) ♂ descr.
 Loc: Australia.
 Type: N.K.
- walkeri** Turner
 Turner (1918a: 93) ♀ descr.
 Loc: Queensland; Northern Territory.
 Type: B.M.
- Genus **CAMPYLONEURUS** Szépligeti, 1906
- australiensis** (Szépligeti)
 Szépligeti [*Iphiaulax*] (1901: 369) descr.
 Szépligeti (1906: 561) n. gen.
 Turner (1918a: 100) key.
 Loc: Australia.
 Type: N.H.M.
- biplicatus** Roman
 Roman (1915: 12) ♀ ♂ descr.

- Loc: Kimberley District, N.W. Australia.
 Type: N.H.M.S.
- mutator** (Fabricius)
 Fabricius [*Ichneumon*] (1775: 335) descr.
 Fabricius [*Bracon*] (1804: 109) descr.
 Brullé [*Myosoma*] (1846: 453) descr.
 Froggatt [*Myosoma*] (1890: 710) listed.
 Dalla Torre [*Myosoma*] (1898: 255) listed, loc. error.
 Turner (1918a: 100) nomenclature.
 Loc: Queensland.
 Type: B.M.
- praeclarus** Turner
 Turner (1918a: 101) ♀ descr., key.
 Loc: Queensland.
 Type: B.M.
 Note: Very near *C. profugus* Turner, of which it may be a variety (Turner 1918a: 101).
- praepotens** Turner
 Turner (1918a: 101) ♀ descr., key.
 Loc: Queensland.
 Type: B.M.
- profugus** Turner
 Turner (1918a: 100) ♀ descr., key.
 Loc: Queensland.
 Type: B.M.
- Genus **CYANOPTERUS** Haliday, 1835
- calligaster** Roman
 Roman (1915: 16) ♀ descr.
 Loc: Fremantle, W. Australia.
 Type: N.H.M.S.
- crassicaudis** Szépligeti
 Szépligeti [*Bracon*] (1901: 397) descr.
 Szépligeti [*Iphiaulax*] (1904: 21) listed.
 Turner (1918a: 94).
 Loc: Doubtful, probably Australia.
 Type: N.H.M.
 Note: This may be synonymous with *C. proficator* (Fabr.) (Turner 1918a: 94).
- innotatus** Turner
 Turner (1918a: 95) ♀ descr., key.
 Loc: Queensland.
 Type: B.M.

proficiscator (Fabricius)

Fabricius [*Ichneumon*] (1775: 335) descr.
 Fabricius [*Bracon*] (1804: 105) descr.
 Szépligeti [*Bracon*] (1904: 37) listed.
 Turner (1918a: 94) noted, synonymy, key.
 Loc: Australia.
 Type: B.M.

rufus Szépligeti

Szépligeti [*Iphiaulax*] (1901: 397) descr.
 Szépligeti [*Iphiaulax*] (1904: 23) listed.
 Szépligeti (1906: 586) genus changed.
 Turner (1918a: 95) noted, key.
 Loc: New South Wales.
 Type: N.H.M.

Genus **HYBOGASTER** Szépligeti, 1906

australiensis (Ashmead)

Ashmead [*Iphiaulax*] (1900: 360) ♂ descr.
 Szépligeti (1904: 23) listed.
 Roman (1915: 15) ♂ ♀ noted, nomenclature.
 Loc: Australia, Kimberley (Roman).
 Type: U.S.N.M. (No. 4918).

Genus **IPHIAULAX** Foerster, 1862

(= *Ipobracon* Dalla Torre, 1898)

afer Szépligeti

Szépligeti (1905: 29) descr.
 Loc: Australia.
 Type: N.H.M.

australis Szépligeti

Szépligeti (1901: 369) ♂ descr.
 Szépligeti (1904: 23) listed.
 Loc: Australia.
 Type: N.H.M.

bifasciatus Szépligeti

Szépligeti (1905: 28) descr.
 Loc: Australia.
 Type: N.H.M.

bipartitus Szépligeti

Szépligeti (1905: 35) descr.
 Loc: Australia.
 Type: N.H.M.

bisignatus Szépligeti

Szépligeti (1905: 29) descr.
 Loc: Australia.
 Type: N.H.M.

camerunensis Szépligeti

Szépligeti (1905: 29) descr.
 Loc: Australia.
 Type: N.H.M.

crenulatus Szépligeti

Szépligeti (1905: 34) descr.
 Loc: Australia.
 Type: N.H.M.

cristatus Szépligeti

Szépligeti (1905: 30) descr.
 Loc: Australia.
 Type: N.H.M.

limbatus (Brullé)

Brullé [*Bracon*] (1846: 433) ♀ descr.
 Froggatt [*Bracon*] (1891: 713) listed.
 Ashmead [*Callibracon*] (1900: 358) descr.
 n. gen.

Szépligeti (1904: 23) listed.
 Froggatt [*Bracon*] (1907: 86) descr.
 Loc: Australia.
 Type: N.K.

longicornis Szépligeti

Szépligeti (1905: 32) descr.
 Loc: Australia.
 Type: N.H.M.

longiseta Szépligeti

Szépligeti (1905: 28) descr.
 Loc: Australia.
 Type: N.H.M.

micans Szépligeti

Szépligeti (1905: 35) descr.
 Loc: Australia.
 Type: N.H.M.

perspicax Szépligeti

Szépligeti (1905: 32) descr.
 Loc: Australia.
 Type: N.H.M.

pretiosus Szépligeti

Szépligeti (1905: 36) descr.
 Loc: Australia.
 Type: N.H.M.

pulchricaudis Szépligeti

Szépligeti (1905: 30) descr.
 Loc: Australia.
 Type: N.H.M.

rubriceps Froggatt

Froggatt (1916: 564) ♀ descr., fig.

Froggatt (1923: 40) descr., fig., host.

Loc: New South Wales.

Host: *Trogodendron fasciculatum* Schreibers (yellow-horned clerid.).

Type: N.K.

ruficeps Szépligeti

Szépligeti (1905: 33) descr.

Loc: Australia.

Type: N.H.M.

scoparius Szépligeti

Szépligeti (1905: 31) descr.

Loc: Australia.

Type: N.H.M.

semirufus Szépligeti

Szépligeti (1905: 33) descr.

Loc: Australia.

Type: N.H.M.

speciosissimus Szépligeti

Szépligeti (1905: 31) descr.

Loc: Australia.

Type: N.H.M.

transiens Turner

Turner (1918a: 95) ♂ ♀ descr.

Loc: Queensland; Northern Territory; N.W. Australia.

Type: B.M.

trifasciatus Szépligeti

Szépligeti (1905: 31) descr.

Loc: Australia.

Type: N.H.M.

trinotata Ashmead

Ashmead (1900: 359) ♂ descr.

Szépligeti (1904: 23) listed.

Loc: Australia.

Type: U.S.N.M. (No. 4917).

Genus **IPOBRACON** Thomson, 1892

emeraldensis Fahringer

Fahringer (1942: 40) descr.

Loc: Australia.

Type: N.H.M.

flaviceps (Cameron)

Cameron [*Poecilobracon*] (1901a: 122) ♂ descr.

Szépligeti [*Ipbiaulax*] (1904: 23) listed.

Turner (1918a: 105) descr., variety.

Loc: Australia.

Type: B.M.

flaviceps Roman **mackayensis** Turner

Turner (1918a: 105) descr.

Loc: Queensland.

Type: B.M.

fraterculus Turner

Turner (1918a: 105) ♀ descr.

Loc: S.W. Australia.

Type: B.M.

gilberti Turner

Turner (1918a: 104) ♀ descr.

Loc: Queensland.

Type: B.M.

ingressor Turner

Turner (1918a: 102) ♀ descr.

Loc: Queensland.

Type: B.M.

pallidicolor Turner

Turner (1918a: 102) ♂ ♀ descr.

Loc: Queensland.

Type: B.M.

punctistigma Roman

Roman (1915: 10) ♀ descr.

Loc: Kimberley District, N.W. Australia.

Type: N.H.M.S.

quadricolor Turner

Turner (1918a: 103) ♀ descr.

Loc: Queensland.

Type: B.M.

torridus Turner

Turner (1918a: 104) ♀ descr.

Loc: Queensland.

Type: B.M.

Genus **MACROBRACON** Szépligeti, 1902

nobilis Turner

Turner (1918a: 96) ♂ ♀ descr.

Loc: Queensland.

Type: B.M.

Genus **MEGALOMMUM** Szépligeti, 1900

annulatum Turner

Turner (1918a: 97) ♂ ♀ descr.

Loc: S.W. Australia; Tasmania.

Type: B.M.

Genus *MERINOTUS* Szépligeti, 1906

xanthocephalus Turner

Turner (1918a: 98) ♂ ♀ descr.

Loc: Queensland.

Type: B.M.

Note: This genus is very near, if not identical with, *Sigalphogaster* Cameron.

Genus *MONOCOILA* Roman, 1910

parva Roman

Roman (1915: 13) ♀ descr.

Loc: Kimberley, N.W. Australia.

Type: N.H.M.S. [Not marked as type.]

Genus *PLATYBRACON* Szépligeti, 1900

nigriceps Cameron

Cameron (1911: 338) ♀ descr.

Loc: Gin Gin, Queensland.

Type: B.M.

Genus *STIGMATOBRACON* Turner, 1918

basipennis Turner

Turner (1918a: 92) ♀ descr., key.

Loc: Queensland.

Type: B.M.

diversipennis Turner

Turner (1918a: 92) ♀ descr., key.

Loc: Victoria.

Type: B.M.

torresensis Turner

Turner (1918a: 93) ♂ descr., key.

Loc: Cape York, Queensland.

Type: B.M.

xanthostigma Turner

Turner (1918a: 92) descr., key.

Loc: Queensland.

Type: B.M.

Genus *VIPIO* Latrielle, 1905

gestroi Mantero

Mantero (1897: 119) ♀ descr.

Dalla Torre (1898: 305) listed.

Szépligeti (1904: 14) listed.

Loc: Australia.

Type: N.K.

Subgenus *VIPIELLUS* Roman, 1915

mjobergi Roman

Roman (1915: 8) ♀ descr.

Loc: Kimberley, N.W. Australia.

Type: N.H.M.S.

Subfamily *SPATHIINAE*

As far as is known at present, the species of this family are external parasites on coleopterous larvae.

Genus *LEPTOSPATHIUS* Szépligeti, 1902

formosus Szépligeti

Szépligeti (1902: 49) ♂ ♀ descr., genotype.

Szépligeti (1904: 54) listed.

Loc: Australia.

Type: N.H.M.

Genus *SPATHIUS* Nees, 1818

apicalis Westwood

Westwood (1882: 43) ♀ descr.

Wilkinson [*S. festinans*] (1931a: 261) ♂ ♀ descr.

Nixon (1943b: 378) descr., key, Austr. record.

Loc: Kuranda, Queensland; India.

Type: N.K.

iridescens (Schletterer)

Schletterer [*Stenophasmus*] (1889: 203) ♂ descr.

Szépligeti (1904: 53) listed, nomenclature.

Wilkinson (1931b: 526) noted.

Loc: Cape York, Queensland; Sydney, New South Wales.

Types: N.H.M.V., S.C.G.M.

kurandaensis Nixon

Nixon (1943b: 393) descr., key.

Loc: Kuranda, Queensland.

Type: B.M.

turneri Nixon

Nixon (1943b: 370) descr.

Loc: Tambourine Mountains, S.E. Queensland.

Type: B.M.

sp. ?

Froggatt (1927: 55–56) recorded and figured.

Loc: New South Wales.

Note: Collected from imported tea chests infested by a *bostrychid* beetle.

Subfamily *HECABOLINAE*Genus *HETEROSPILUS* Haliday, 1862*asion* Nixon

Nixon (1943a: 260) ♂ ♀ descr., fig.

Loc: Maryborough and Imbil, Queensland.

Host: *Xylopsocus gibbicollis* (Bostrychid.).

Type: B.M.

Genus *MONOLEXIS* Foerster, 1862*atis* Nixon

Nixon (1943a: 261) ♂ ♀ descr., fig.

Loc: Atherton, Palm Is., Queensland.

Host: *Lyctus brunneus* (Lyctid.).

Type: B.M.

Note: "It is possible that my new species is a European insect which has been introduced with *Lyctus brunneus* for I have examined a single specimen, a female (Italy, bred from *Bostrychid* in figs) which appears to be identical with *atis*." (Nixon, 1943a: 262.)

Subfamily *EXOTHECINAE*Genus *OPIOPTERUS* Szépligeti, 1908*parvus* Szépligeti

Szépligeti (1908: 318) descr., genotype.

Loc: S.W. Australia.

Type: N.H.M.

Genus *SPINARIA* Brullé, 1846*aliciae* Turner

Turner (1917: 244) descr.

Loc: Australia.

Type: B.M.

Genus *XENARCHA* Foerster, 1862*tricolor* Szépligeti

Szépligeti (1908: 318) descr.

Loc: S.W. Australia.

Type: N.H.M.

Subfamily *ROGADINAE*

The majority of the species of this subfamily are parasitic on lepidopterous larvae

Genus *ROGAS* Nees, 1818(= *Rhogas* Agassiz 1846)*politus* Szépligeti

Szépligeti (1906: 617) descr.

Loc: Australia.

Type: N.H.M.

tricolor Haliday

Haliday (1836: 98) descr.

Szépligeti (1904: 87) listed.

Loc: Australia.

Type: N.K.

Subfamily *DORYCTINAE*

Most species of this family are external parasites of coleopterous larvae.

Genus *ACANTHODORYCTES* Turner, 1918*gilberti* Turner

Turner (1918b: 56) ♀ descr., key.

Loc: Mackay, Queensland.

Type: B.M.

morleyi (Froggatt)Froggatt [*Iphiaulax*] (1916: 566) ♀ descr., host.Froggatt [*Iphiaulax*] (1923: 42) descr., host.

Turner (1918b: 56) noted, genotype.

Loc: East Coast, Australia.

Host: *Trogodendron fasciculatum* (Clerid.).

Type: B.M.

Genus *CAENOPACHYELLA* Szépligeti, 1908*lutea* Szépligeti

Szépligeti (1908: 399) ♂ ♀ descr., genotype.

Loc: New South Wales.

Type: N.H.M.

Genus *DORYCTES* Haliday, 1836*laemosacci* Nixon

Nixon (1943: 257) ♀ descr., host

Loc: Emu Valley, Queensland.

Host: *Laemosaccus* sp. (Curculionid.).

Type: B.M.

parvus Muesebeck

Muesebeck (1941: 150) ♂ ♀ descr.

Loc: Queensland, Australia. The type locality is Mayaguez, Puerto Rico.

Type: U.S.N.M. No. 55678.

Host: *Dinoderus minutus* (Fabr.) (Type)*Lyctus* sp. (Queensland.)

Note: This is rather a common species in various tropical regions of the world.

syagrii (Fullaway)

Fullaway [*Ischiogonus*] (1922: 201) ♂ ♀ descr., host.

Loc: New South Wales.

Host: *Syagrius fulvitaris* Pasc. (fern weevil).

Type: N.K.

Note: Fullaway (1921: 101, 114) records a species of *Doryctes* parasitic on the fern weevil (*Syagrius fulvitaris*) from New South Wales. This probably is the same species as recorded above.

Genus **LIODORYCTES** Szépligeti, 1906

atriceps Turner

Turner (1918b: 54) ♀ descr., key.

Loc: Mackay, Queensland.

Type: B.M.

australiensis (Szépligeti)

Szépligeti [*Acanthobracon*] (1902: 48) ♂ descr.

Szépligeti [*Neotrimorus*] (1904: 64) listed.

Szépligeti (1906: 599) noted, genotype.

Turner (1918b: 55) noted.

Loc: Cooktown, Kuranda, Mackay, Queensland.

Type: B.M.

erythrothorax Turner

Turner (1918b: 54) ♂ ♀ descr., key.

Loc: Mackay, Queensland.

Type: B.M.

nigridorsalis Turner

Turner (1918b: 53) ♀ descr., key.

Loc: Port Darwin, Australia.

Type: B.M.

Genus **SYNGASTER** Brullé, 1846

annulicornis Brullé

Brullé (1846: 454) descr.

Froggatt (1890: 714) listed.

Szépligeti (1904: 67) listed.

Turner (1918b: 57) noted.

Loc: Australia.

Type: N.K.

Note: Turner (1918b: 57) had not seen this species, and is doubtful of its

true generic position.

lepidus Brullé

Brullé (1846: 459) descr.

Froggatt (1890: 714) listed.

Szépligeti [*S. lepidus*] (1904: 67) listed [error in spelling.]

Cameron (1912: 195).

Turner (1918b: 57) noted.

Loc: S.E. Australia; Tasmania.

Type: N.K.

INTRODUCED SPECIES

I am indebted to Mr. Frank Wilson, Principal Research Officer, C.S.I.R.O., Entomology Division, for the following list of braconids introduced into Australia in connection with biological control. No information is available on the extent to which they have become established in the various localities in which they were liberated.

**Apanteles rubecula* Marshall.

**Apanteles glomeratus* Linn.

Ascogaster carpocapsae Vier. (*A. quadridentatus* Wesm.)

Bassus diversus (Mues.) (*Agathis diversus*)

Chelonus phthorimaeae Gahan

**Macrocentrus ancylivorus* Rohwer

Microbracon gelechia Ashmead (*Bracon gelechia*)

Triaspis thoracicus (Say) (*T. sayi* Mues. and Walkley.)

The above species are listed under the names by which they are generally referred to in the literature, the correct nomenclature is given in parentheses where this is different.

Species that have become definitely established are marked with an asterisk and included in the body of the catalogue.

REFERENCES

- ASHMEAD, W. H. 1888. Descriptions of new Braconidae in the collections of the U. S. National Museum. *U. S. Natl. Mus., Proc.* 2: 611-671.
 — 1900. Notes on some New Zealand and Australian parasitic Hymenoptera, with descriptions of new genera and new species. *Linn. Soc. N. S. Wales, Proc.* 25: 327-360.

- BAKER, C. F. 1926. Braconidae-Cheloninae of the Philippines, Malaya and Australia. I. Chelonini (except Chelonus). *Philippine Jour. Sci.* 31: 451-499.
- BAKER, G. C. 1906. Fruitfly parasites. *West. Austral., Dept. Agr., Jour.* 16: 27-28.
- BINGHAM, C. T. 1906. New species of Braconidae and Chalcididae from North Queensland bred by F. P. Dodd. *Ent. Soc. London, Trans.* 1906 (1): 125-130.
- BRUES, C. T. 1920. The braconid genus *Trachypterus* Guérin. *Psyche* 27: 59-62.
- BRULLÉ, G. A. 1846. *Histoire naturelle des insectes, Hymen.* Tom. IV. 680 pp. Atlas, col. pls. Roret, Paris.
- CAMERON, P. 1891. Hymenopterological notices. *Manchester Phil. Soc., Mem.* 4 (4): 182-194.
- 1901a. Descriptions of three new genera and species of Hymenoptera from Eastern Asia and Australia. *Ann. and Mag. Nat. Hist.* (7) 8: 116-123.
- 1901b. On a Collection of Hymenoptera made in the neighbourhood of Wellington by Mr. G. V. Hudson, with description of new genera and species. *New Zealand Inst., Trans.* 33: 104-120.
- 1906. Descriptions of two new species of Braconidae from Australia. *Entomologist* 39: 26.
- 1911. A collection of parasitic Hymenoptera made by Mr. W. W. Froggatt in N. S. W. with descriptions of new genera and species. Part I *Linn. Soc. N. S. Wales, Proc.* 36: 333-365.
- 1912. On a collection of parasitic Hymenoptera made by Mr. W. W. Froggatt in N. S. W. with descriptions of new genera and species. Part III. *Linn. Soc. N. S. Wales, Proc.* 37: 172-216.
- CURTIS, J. 1855. Hymenoptera in *Book of the Garden* [McIntosh ed.] Vol. 2. 220 pp.
- CUSHMAN, R. A. 1922. The identity of *Ichneumon coccinellae* Schrank. *Ent. Soc. Wash., Proc.* 24: 241-242.
- DALLA TORRE, K. W. von. 1898. *Catalogus Hymenopterorum* . . . Vol. 4. Braconidae 1-323 pp. Lipsiae.
- DODD, F. P. 1906. Notes upon some remarkable parasitic insects from North Queensland. *Ent. Soc. London, Trans.* 1906: 119-124.
- DUMBLETON, L. J. 1935. *Apanteles tasmanica* Cam: a braconid parasite of leaf-roller larvae. *New Zeal. Jour. Sci. and Technol.* 17: 572-576.
- 1940. *Tortrix postvittana* Walk. and its parasites in Australia. *New Zeal. Jour. Sci. and Technol.* 21: 222a-336a.
- ERICHSON, W. F. 1842. Beitrag zur Fauna von Vandiemensland mit besonderer Rücksicht auf die Geographische Verbreitung der Insecten. *Wiegmann's Arch. f. Naturgesch.* 8: 83-287.
- FABRICIUS J. C. 1775. *Systema Entomologiae.* xxxii + 832 pp., Flensburgi et Lipsiae.
- 1804-5. *Systema Piezatorum.* 439 pp. Brunsvigae.
- FAHRINGER, J. 1942. Neue und seltene Braconiden aus dem indo-orientalischen und australischen Faunengebiet. *Arbx über Morph. u. Taxonom. Ent.* 9: 37-46.
- FOERSTER, A. 1862. Synopsis der Familien u. Gattungen der Braconen. *Naturhist. Ver. der Preuss. Rheinlande, Verhandl.* 9(19): 225-288.
- FROGGATT, W. W. 1891. Catalogue of the described Hymenoptera of Australia. Part I. *Linn. Soc. N. S. Wales, Proc.* 5: 689-762.
- 1904. Experimental work with the peach aphid. *Agr. Gaz. N. S. Wales* 15: 603-612.
- 1907. *Australian insects.* xiv + 449 pp., 37 pls. 180 text figs. William Brooks and Company, Limited, Sydney.
- 1910. Friendly insects. *Agr. Gaz. N. S. Wales* 21: 335-346.
- 1912. Parasitic enemies of the Mediterranean flour moth. *Agr. Gaz. N. S. Wales* 23: 307-311.
- 1916. Forest longicorn beetles and their parasites. *Agr. Gaz. N. S. Wales* 27: 561-567.
- 1920. The powder post beetle and its parasites. *Agr. Gaz. N. S. Wales* 31: 273-

- 274.
- 1923. *Forest insects of Australia*. viii + 171 pp., 2 col. pls., 44 pls., 33 text figs. Forestry Commissioners of N. S. W., Sydney.
- 1927. *Forest insects and timber borers*. iv + 107 pp. Government Printing, Sydney.
- FULLAWAY, D. T. 1921. The fern-weevil (*Syagrius fulvitaris*.) *Hawaii Forester and Agr.* 18: 101–114.
- 1922. A new hymenopterous parasite on the Australian fern-weevil, *Syagrius fulvitaris*. *Bul. Ent. Res.* 13: 201.
- 1950. Fruit-fly parasites collected in Queensland by N. L. H. Krauss in 1949. *Hawaii. Ent. Soc., Proc.* 14: 65–67.
- 1951. A review of the Indo-Australian parasites of the fruit-fly (Tephritidae). *Hawaii. Ent. Soc., Proc.* 14: 243–250.
- GAHAN, A. B. 1928. Some reared parasitic Hymenoptera from the Sudan. *Bul. Ent. Res.* 19: 255–257.
- GUERIN-MENEVILLE, F. E. 1830–32 Atlas. 1838 Descriptions. In Duperrey *Voyage autour du monde sur . . . La Coquille*. 1822–1825. Zool. II, 2, Div. I, Chap. XIII Insectes. pp. 57–302. Paris.
- GURNEY, W. B. 1910. Fruitflies and other insects attacking cultivated and wild fruits in N. S. W. Part I. *Agr. Gaz. N. S. Wales* 21: 423–433.
- HALIDAY, A. H. 1833. An essay on the classification of the parasitic Hymenoptera of Britain. *Ent. Monthly Mag.* 1: 259–276.
- 1834. Essay on the classification of the Parasitic Hymenoptera, etc. *Ent. Monthly Mag.* 2: 225–259.
- 1836. Essay on the parasitic Hymenoptera. *Ent. News* 4: 92–106.
- HOLMGREN, A. E. 1868. Hymenoptera, species novas descripsit. Pt. 12, pp. 391–442, 1 pl. In *Kongliga Svenska Fregatten Eugenies Resa omkring jorden . . . aren 1851–53*. Stockholm (& Uppsala).
- JARVIS, E. 1921. A new moth-pest of sugarcane and maize. *Queensland Agr. Jour.* 16: 276–280.
- JOHNSTON, W. G. 1895. A new parasite of the Mediterranean flour moth. *Ent. News* 6: 342–345.
- KOKUJEW, N. R. 1901. Braconides nouveaux d'Australie. I—Helconides. *Rev. Russe. d'Ent.* 1: 13–17.
- LINNAEUS, C. 1758. *Systema Naturae*. Ed. 10. 824 pp. Laurentii Salvii, Holmiae.
- MANTERO, G. 1897. Description d'une nouvelle espèce de *Vipio* Latr. *Feuille Nat.* 27: 119.
- MARSHALL, T. A. 1885. Monograph of British Braconidae. *Ent. Soc. London, Trans.* 1885: 1–280.
- 1889. Species des Hyménoptères d'Europe et d'Algérie. [Edmond André ed.] Vol. 4. 609 pp. Gray and Bouffarat Frères, Paris [?].
- 1891. A monograph of British Braconidae. Part IV. *Ent. Soc. London, Trans.* 1891: 7–61.
- 1896. Species des Hyménoptères d'Europe et d'Algérie. [Edmond André ed.] Vol. 5. 635 pp. Gray and Bouffarat Frères, Paris [?].
- MUESEBECK, C. F. W. 1939. A new reared Meteorus from Tasmania. *Ent. Soc. Wash., Proc.* 41: 172–173.
- 1941. Two new reared species of *Doryctes* (Hymen. Bracon.). *Ent. Soc. Wash., Proc.* 43(7): 149–152.
- and K. V. KROMBEIN. 1951. *Hymenoptera of America north of Mexico. Synoptic catalog*. 1420 pp. United States Department of Agriculture. Agriculture Monograph No. 2. Government Printing Office, Washington.
- MUSGRAVE, ANTHONY. 1930. The history of Australian entomological research. *Austral. Zoologist* 6: 189–203.
- 1932. *Bibliography of Australian entomology 1775 to 1936*. viii + 380 pp. Royal Zoological Society, London.
- MYERS, J. G. 1929. Notes on some natural enemies of *Plodia interpunctella* in Australia. *Bul. Ent. Res.* 20: 425–430.
- NEES VON ESENBECK, C. G. 1811. *Ichneumonides adsciti in genera et families divisi*.

- Berlin. *Gesell. f. Naturf. Freunde Mag.* 5: 3-37.
- 1834. *Hymenopterorum Ichneumonibus affinium monographiae, genera Europaea et species illustratae*. 448 pp. Cotta, Stuttgart et Tubingen.
- NIXON, G. E. J. 1938. Notes on the taxonomy and synonymy of *Zele* Curtis and *Macrocentrus* Curtis. *Bul. Ent. Res.* 29: 415-424.
- 1943a. New braconid parasites of Australian wood-boring beetles, with notes on the sub-family Hecobolinae. *Bul. Ent. Res.* 34: 257-267.
- 1943b. A revision of the *Spathiinae* of the Old-World. (Hymen. Braconid.). *Roy. Ent. Soc. London, Trans.* 93: 173-456.
- OLLIFF, A. S. 1893. A report on a visit to the Clarence River District, etc. *Agr. Gaz. N. S. Wales* 4: 373-387.
- PEMBERTON, C. E., and H. F. WILLARD. 1918. A contribution to the biology of fruit-fly parasites in Hawaii. *Jour. Agr. Res.* 15: 419-465.
- PERKINS, F. A. 1925. The hibernation and parasitism of a fruit-fly in the Stanthorpe District. *Queensland Agr. Jour.* 23: 431-437.
- ROHWER, S. A. 1923. A new *Macrocentrus* reared from the strawberry leaf-roller. (Hymen. Brac.). *Ent. Soc. Wash., Proc.* 25: 168-169.
- ROMAN, A. 1915. Results of Dr. E. Mjöberg's Swedish Scientific Expedition to Australia 1910-13. *Arkiv för Zool.* 9 (9): 1-16.
- SAY, THOMAS. 1836. Descriptions of new species of N. American Hymenoptera and observations of some already described. *Boston Jour. Nat. Hist.* 1: 210-305.
- SCHLETTERER, AUG. 1889. Die Hymenopteron — Gattungen *Stenophasmus* Smith, etc. *Berlin. Ent. Ztschr.* 33: 198-250.
- SCHRANK, F. 1802. *Fauna Boica*. 2(2). 412 pp. Nürnberg.
- SCHULZ, W. A. 1911. Zweihundert Alte Hymenopteren. *Zool. Ann. Würzburg*. 4: 1-220.
- SILVESTRI, F. 1916. Descrizione di aluni imenotteri braconidi parassiti di ditteri nell' India. *Portici R. Scuola Super. di Agr., Lab. Zool. Gen. e Agr., Bol.* 11: 160-169.
- SMITH, C. F. 1944. Aphidiinae of North America. *Ohio State Univ., Dept. Zool. and Ent., Contrib.* 6: 1-154.
- SWEZEY, O. H. 1925. Records of introduction of beneficial insects into the Hawaiian Islands. *Hawaii. Planters' Rec.* 19: 369-376.
- SZÉPLIGETI, GY. 1900. Braconiden aus New-Guinea in der Sammlung des Ungarischen National-Museums. *Termes Fuzetek.* 23: 49-65.
- 1901. Tropische Cenocoeliden und Braconiden aus der Sammlung des Ungarischen National-Museums. *Termes Fuzetek.* 24: 353-402.
- 1902. Tropische Cenocoeliden und Braconiden aus der Sammlung des Ungarischen National-Museums. II. *Termes Fuzetek.* 25: 39-84.
- 1904. *Genera insectorum*. Fasc. 22a and 22b. pp. 1-253. P. Wytsman, Brussels.
- 1905. Exotische Braconiden aus den Aethiopischen, Orientalischen und Australischen Regionen. *Mus. Nat. Hungarici., Ann.* 3: 25-55.
- 1906. Braconiden aus der Sammlung des Ungarischen National-Museums. I. *Mus. Nat. Hungarici., Ann.* 4: 547-618.
- 1908a. Braconiden aus der Sammlung des Ungarischen National-Museums II. *Mus. Nat. Hungarici., Ann.* 6: 397-427.
- 1908b. Braconidae und Ichneumonidae. *Die Fauna Südwest Australiens* 1 (9): 317-324.
- TIMBERLAKE, P. H. 1918. Notes on immigrant parasitic Hymenoptera of the Hawaiian Islands. *Hawaii. Ent. Soc., Proc.* 3(5): 399-404.
- TRYON, H. 1900. Caterpillar plague. (*Lucania unipuncta* Haw.). *Queensland Agr. Gaz.* 6: 135-147.
- TURNER, R. E. 1917. Notes on the Braconidae in British Museum. I. *Ann. and Mag. Nat. Hist.* (8) 20: 241-249.
- 1918a. Australian Braconidae in British Museum. *Ent. Soc. London, Trans.* 1918: 91-114.

- 1918*b*. Notes on Braconidae in British Museum. II. On Australian species of *Cardiophilinae* and *Doryctinae*. *Ann. and Mag. Nat. Hist.* IX, 1: 49–57.
- 1918*c*. Notes on Braconidae in British Museum. III. On new Australian *Agathinae*. *Ann. and Mag. Nat. Hist.* IX, 1: 221–230.
- 1918*d*. Notes on Braconidae in British Museum. IV. On new Helconinae most Australian. *Ann. and Mag. Nat. Hist.* IX, 2: 163–173.
- 1927. New parasitic Hymenoptera in British Museum. *Ann. and Mag. Nat. Hist.* IX, 20: 553–560.
- VIERECK, H. L. 1913. Descriptions of six genera and twelve new species of Ichneumon flies. *U. S. Natl. Mus., Proc.* 44: 639–648.
- WESTWOOD, J. O. 1882. Descriptions of new or imperfectly known species of Ichneumonones. *Tijdschr. v. Ent.* 25: 17–48.
- WILKINSON, D. S. 1928*a*. A revision of the Indo-Australian species of the genera *Apanteles*. (Hymen. Bracon.). *Bul. Ent. Res.* 19: 79–105 (Part I); and 109–146 (Part II).
- 1928*b*. New parasitic Hymenoptera and notes on other species. *Bul. Ent. Res.* 19: 261–265.
- 1929*a*. A revision of the Indo-Australian and Ethiopian species of the genus *Microgaster*. (Hymen. Bracon.). *Ent. Soc. London, Trans.* 77: 99–123.
- 1929*b*. New parasitic Hymenoptera and notes on other species. *Bul. Ent. Res.* 20: 103–114.
- 1930*a*. A revision of Indo-Australian species of the genus *Microplitis*. (Hymen. Bracon.). *Bul. Ent. Res.* 21: 23–27.
- 1930*b*. New species and host records of Braconidae. *Bul. Ent. Res.* 21: 481–487.
- 1931*a*. Five new species of *Spathius*. (Hymen. Bracon.). *Bul. Ent. Res.* 22: 250–265.
- 1931*b*. On the Indo-Australian and Ethiopian species of the braconid genus *Spathius*. *Ent. Soc. London, Trans.* 79: 505–530.
- 1932*a*. A revision of the Ethiopian species of the *Apanteles*. (Hymen. Bracon.). *Ent. Soc. London, Trans.* 80: 301–344.
- 1932*b*. Three new braconids. (Hymen. Bracon.). *Stylops* 1: 85–88.
- 1934*a*. On some *Microgasterinae*. (Hymen. Bracon.). *Stylops* 3: 118–120.
- 1934*b*. On some *Apanteles*. (Hymen. Bracon.). *Stylops* 3: 145–156.

INDEX TO AUSTRALIAN BRACONIDAE

abdominalis Szepl. (Ascogaster)	203
Acanthobracon see Liodoryctes	211
Acanthodoryctes	210
Acoelius see Adelius	200
Adelius	200
afer Szepl. (Iphiaulax)	207
Agathiella	198
AGATHIDINAE	198
Agathis (see also Agathiella)	199
albimanus Szepl. (Opus)	204
aliciae Turner (Spinaria)	210
Amicroplus see Macrocentrus	196
ancylivorus Rohw. (Macrocentrus)	196
annulatum Turner (Megalommum)	208
annulicornis Brullé (Syngaster)	211
antennalis Szepl. (Ascogaster)	203
anthelae Wilkn. (Apanteles)	200
antipoda Ashm. (Orgiloneura)	198
antipoda Ashm. (Apanteles) see ruficrus	201
antipodalis Ashm. (Meteorus)	196
Apanteles	200
Aphidius see Diaeretus	195
Aphidiinae	195
apicalis Westwood (Spathius)	209
Aridelus	196
Areogaster	203
Ascogaster	203
asion Nixon (Heterospilus)	210
Aspidocolpus see Austrohelcon	197
assimilator Turner (Cardiophiles)	202
Atanycolus	205
atis Nixon (Monolexis)	210
atriceps Turner (Liodoryctes)	211
australasicus Cam. (Bracon)	205
australiansis Kokj. (Austrohelcon)	197
australiensis Ashm. (Adelius)	200
australiensis Ashm. (Apanteles)	200
australiensis Szepl. (Ascogaster)	203
australiensis Szepl. (Bracon)	205
australiensis Szepl. (Campyloneurus)	206
australiensis Szepl. (Chelonus)	203
australiensis Ashm. (Hybogaster)	207
australiensis Szepl. (Liodoryctes)	211
australiensis Ashm. (Phanerotoma)	204
australiensis Nixon (Zelee)	198
australis Szepl. (Iphiaulax)	207
Austrohelcon	197

basalis Binghm. (Microplitis).....	202	diversipennis Turner (Stigmatobracon).....	209
basipennis Turner (Stigmatobracon).....	209	diversipennis Turner (Braunsia).....	199
Bassus see Agathis.....	199	diversipes Turner (Disophrys).....	200
bicolor Brullé (Agathis).....	199	Doryctes.....	210
bicolor Brullé (Braunsia).....	199	DORYCTINAE.....	210
bicolor Szepl. (Meteorus).....	196	dumbletoni Mues. (Meteorus).....	196
bicolor Szepl. (Westwoodiella).....	198	emeraldensis Fahr. (Ipobracon).....	208
bifasciatus Szepl. (Iphiaulax).....	207	Ephedrus.....	196
bimaculatus Szepl. (Bracon).....	205	erythrocephalus Turner (Austrohelcon).....	197
bimarus Turner (Bracon).....	205	erythropus Cam. (Ascogaster).....	203
bipartitus Szepl. (Iphiaulax).....	207	erythrothorax Turner (Liodoryctes).....	211
biplicatus Roman (Campyloneurus).....	206	eucalypti Cam. (Bracon).....	205
biroi Szepl. (Apanteles).....	200	EUPHORINAE.....	196
Biroia.....	199	euthyrrihi Cam. see konowi (Parahelcon).....	197
bisignatus Szepl. (Iphiaulax).....	207	exiles Turner (Aridelus).....	196
BLACINAE.....	198	exornata Turner (Disophrys).....	200
Bracon.....	205	EXOTHECINAE.....	210
BRACONINAE.....	205	festinans see apicalis.....	209
Braunsia.....	199	festinata Turner (Agathiella).....	198
brevicaudis Szepl. (Opius).....	204	fijiensis Full. (Opius).....	204
brevicornis (Bracon) see hebetor.....	205	flaviceps Cam. (Ipobracon).....	208
Caenopachyella.....	210	flavipes Cam. (Apanteles).....	200
Callibracon see Iphiaulax.....	207	Fohgra see Macrocentrus.....	196
calligaster Roman (Cyanopterus).....	206	formosus Szepl. (Leptospathius).....	209
Calohelcon.....	197	fraterculus Turner (Ipobracon).....	208
camerunensis Szepl. (Iphiaulax).....	207	froggatti Cam. (Bracon).....	205
Campyloneurus.....	206	froggatti Full. (Opius).....	204
capitator Fabr. (Bracon).....	205	gestroi Mant. (Vipio).....	209
Cardiochiles.....	202	gilberti Turner (Acanthodoryctes).....	210
CARDIOCHILINAE.....	202	gilberti Turner (Ipobracon).....	208
carpocapsae Ashm. (Opius).....	204	glomeratus Linn. (Apanteles).....	201
caudata Szepl. (Ascogaster).....	203	guyanensis Cam. (Apanteles).....	201
CHELONINAE.....	203	Gymnoscelus see Helcon.....	197
Chelonus.....	203	hartmeyer Szepl. (Bracon).....	205
cinctus Baker (Ascogaster).....	203	hebetor Say. (Bracon).....	205
clavatus Guerm. (Trachypterus).....	197	HECABOLINAE.....	210
coccinellae Schrank (Perilitus).....	196	Helcon (also see Austrohelcon).....	197
commutator Turn. (Cremnops).....	199	HELCONINAE.....	197
conjugator Turn. (Sigalphus).....	204	Helconini.....	197
coriaceus Szepl. (Chelonus).....	203	Helorimorpha see Aridelus.....	196
Cotesia see Apanteles.....	200	Heterospilus.....	210
crassicaudis Szepl. (Cyanopterus).....	206	hospitator Fabr. (Bracon).....	205
Cremnops.....	199	Hybogaster.....	207
crenulatus Szepl. (Iphiaulax).....	207	indultor Erich. (Austrohelcon).....	197
cristatus Szepl. (Iphiaulax).....	207	ingressor Turner (Ipobracon).....	208
Cyanopterus.....	206	innotatus Turner (Cyanopterus).....	206
deeralensis Full. (Opius).....	204	inornatus Kokj. (Austrohelcon).....	197
defensor Fabr. (Bracon).....	205	intensus Baker (Ascogaster).....	203
deliadi Bingham (Apanteles).....	200	Iphiaulax see also Campyloneurus.....	206
demolitor Wilkn. (Microplitis).....	202	Iphiaulax see also Trichiohelcon.....	197
detectus Baker (Ascogaster).....	203	Iphiaulax see also Cyanopterus.....	206
Diachasma see Opius.....	204	Iphiaulax.....	207
Diaeretus.....	195	Ipobracon.....	208
Diluta Turner (Disophrys).....	200	Ipobracon see also Iphiaulax.....	207
dimidiata Brullé (Agathis).....	199	iridescens Schl. (Spathius).....	209
Dinocampus see Perilitus.....	196	Ischiogonus see Doryctes.....	210
Diospilini.....	198	Ischius see Orgilus.....	198
Diospilus.....	198	juglandis Ashm. see hebetor Say.....	205
Disophrys.....	200	konowi Kokj. (Parahelcon).....	197
dissimilis Turner (Cremnops).....	199	kraussi Full. (Opius).....	204
dissimulator Turner (Cardiochiles).....	202	kurandaensis Nixon (Spathius).....	209
distinctus Baker (Ascogaster).....	203	laemosacci Nixon (Doryctes).....	210
		laeviventris Baker (Ascogaster).....	203

latibalteata Cam. (Agathiella)	198	parvus Szepl. (Opiopterus)	210
laena Cam. (Platyagathis)	200	pedunculatus Szepl. (Microdus)	199
leeuwiniensis Turner (Phanerotoma)	204	perelegans Bingh. (Microplitis)	202
lepidus Brullé (Syngaster)	211	Perilitus	196
Leptospathius	209	perkinsi Full. (Opius)	204
leucogaster Holmgr. (Orgilus)	198	perniciosa Wilkn. (Microgaster)	202
levisulcatus Cam. (Bracon)	205	persicae Frogg. (Ephedrus)	196
limbatus Brullé (Iphiaulax)	207	perspicax Szepl. (Iphiaulax)	207
Liodoryctes	211	persulcatus Silv. (Opius)	204
Lipolexis see Diaeretus	195	petiolaris Szepl. (Microgaster)	202
longicornis Szepl. (Iphiaulax)	207	Phanerotoma	204
longiseta Szepl. (Iphiaulax)	207	philoeampus Cam. (Apanteles)	201
lutens Cam. (Meteorus)	196	phoracanthae Frogg. (Trichiohelcon)	197
lutea Szepl. (Caenopachyella)	210	pilitarsis Cam. (Bracon)	206
Macrobracon	208	Platyagathis	200
MACROCENTRINAE	196	Platybracon	209
Macrocentrus	196	Poecilobracon see Ipobracon	208
maculaticeps Baker (Ascogaster)	203	politus Szepl. (Rogas)	210
magnifica Wilkn. (Microgaster)	201	praeclarus Turner (Campyloneurus)	206
maligna Turn. (Agathiella)	198	praepotens Turner (Campyloneurus)	206
marginipennis Turn. (Cremnops)	199	pretiosus Szepl. (Iphiaulax)	207
martialis Turn. (Agathis)	199	proficisator Fabr. (Cyanopterus)	207
Megalommum	208	profugus Turner (Campyloneurus)	206
megaspilus Cam. (Chelonus)	203	Protapanteles see Apanteles	200
meridionalis Turner (Agathiella)	198	Protelus see Meteorus	196
meridionalis Turner (Austrohelcon)	197	pulchellus Brullé (Bracon)	206
Merinotus	209	pulchicaudis Szepl. (Iphiaulax)	207
METEORINAE see Euphorinae	196	punctistigma Roman (Ipobracon)	208
Meteorus	196	quadricolor Turner (Ipobracon)	208
micans Szepl. (Iphiaulax)	207	radiantis Wilkn. (Apanteles)	201
Microbracon see Bracon	205	rapae Curtis (Diaeretus)	195
Microdus see Agathis	199	reficeps Szepl. (Iphiaulax)	208
Microgaster	201	resplendens Wilkn. (Microgaster)	202
Microgaster see also Apanteles	200	RHOADINAE see ROGADINAE	210
MICROGASTERINAE	200	Rhogas see Rogas	210
Microplitis	202	rixosa Wilk. (Microgaster)	202
Minima Turner (Agathiella)	198	ROGADINAE	210
mjobergi Roman (Vipellus)	209	Rogas	210
modestus Baker (Ascogaster)	203	rubecula Marsh. (Apanteles)	201, 211
Monocoila	209	ruberrima Turner (Disophrys)	200
Monolexis	210	rubriceps Frogg. (Iphiaulax)	207
morata Wilkn. (Microgaster)	201	rubromaculatus Cameron (Macrocentrus)	197
morleyi Frogg. (Acanthodoryctes)	210	rufator Romans (Cardiochiles)	202
mutator Fabr. (Campyloneurus)	206	ruficeps Szepl. (Agathiella)	198
Myosoma see Campyloneurus	206	ruficeps Szepl. (Iphiaulax)	208
Neotrimorus see Liodoryctes	211	ruficeps Szepl. (Diospilus)	198
narangae Vier. see ruficrus	201	ruficeps Brullé (Westwoodiella)	198
nigriceps Cam. (Platybracon)	209	ruficrus Hal. (Apanteles)	201
nigridorsalis Turner (Liodoryctes)	211	rufifrons Turner (Disophrys)	200
nigropectus Turner (Disophrys)	200	rufithorax Turner (Helcon)	197
nobilis Turner (Macrobracon)	208	rufithorax Turner (Agathis)	199
nonagriæ Olliff. see flavipes Cam.	200	rufiventris Bingh. (Apanteles)	201
obscuripennis Turn. (Calohelcon)	197	rufobrunneus Turner (Agathis)	199
Opiinae	204	rufoniges Turner (Helcon)	197
Opiopterus	210	rufus Szepl. (Cyanopterus)	207
Opius	204	rugosa Turner (Agathiella)	198
Orgiloneura	198	scoparius Szepl. (Iphiaulax)	208
Orgilus	198	semirufus Szepl. (Iphiaulax)	208
pallidicolor Turn. (Ipobracon)	208	sicarius (Apanteles)	201
palpalis Szepl. (Ascogaster)	203	Sigalphus	204
Parahelcon	197	signatipennis Turner (Disophrys)	200
parva Roman (Monocoila)	209	similipicta Turner (Disophrys)	200
parvus Mues. (Doryctes)	210	similis Szepl. (Chelonus)	203

solitaria Turner (Biroia).....	199
sons Wilkn. (Microgaster).....	202
SPATHIINAE.....	209
Spathius.....	209
speciosissimus Szepl. (Iphiaulax).....	208
Sphaeropyx see Sigalphus.....	204
Spinaria.....	210
Stenophasmus see Spathius.....	209
Stigmatobracon.....	209
syagrii Full. (Doryctes).....	211
sydneyensis Cam. see ruficrus Haliday.....	201
Syngaster.....	211
thalpocharis see thalpocharis.....	206
tasmanica Cam. (Apanteles).....	201
tasmanicus Wilkn. (Macrocentrus).....	197
tearae Wilkn. (Microgaster).....	202
regularis Szepl. (Ascogaster).....	203
regularis Szepl. (Microgaster).....	202
tenuissima Turner (Agathiella).....	198
terminatus see coccinellae.....	196
talpocaris see thalpocharis.....	206
thalpocharis Szepl. (Bracon).....	206
tomentosus Szepl. (Atanycolus).....	205
torrensensis Turner (Stigmatobracon).....	209
torridus Turner (Ipobracon).....	208
Trachypterus.....	197
transiens Turner (Iphiaulax).....	208
Trichiohelcon.....	197
tricolor Szepl. (Agathiella).....	199
tricolor Szepl. (Ascogaster).....	203
tricolor Ashm. (Bracon).....	206
tricolor Hal. (Rogas).....	210
tricolor Szepl. (Xenarcha).....	210
trifasciatus Szepl. (Iphiaulax).....	208
trinotata Ashm. (Iphiaulax).....	208
tripartitus Szepl. (Sigalphus).....	204
turneri Cam. (Bracon).....	206
turneri Nixon (Spathius).....	209
tryoni Cam. (Opius).....	204
uniformis Turner (Cardiochiles).....	202
unimaculata Turner (Agathiella).....	199
unimaculatus Szepl. (Chelonus).....	204
verticalis Turner (Cardiochiles).....	202
Vipiellus (Sub-genus).....	209
Vipio.....	209
VIPIONINAE see BRACONINAE.....	205
viduus Baker (Ascogaster).....	203
vulpina Wilkn. (Microgaster).....	202
walkeri Turner (Bracon).....	206
Westwoodia see Westwoodiella.....	198
Westwoodiella.....	198
xanthocephalus Turner (Merinotus).....	209
xanthopsis Turner (Agathis).....	199
xanthostigma Szepl. (Cremnops).....	200
xanthostigma Turner (Stigmatobracon).....	209
Xenarcha.....	210
Zele.....	198
Zelini.....	198

HOST INDEX OF AUSTRALIAN BRACONIDAE

Coleoptera

Coccinella californica Mann. (Coccinellid.).....	196
Coleomegilla maculata (Deg.) (Coccinellid.).....	196
Cycloneda trifasciata juliana Muls. (Coccinellid.).....	196
Cycloneda sanguinea (Linn.) (Coccinellid.).....	196
Dinoderus minutus (Fabr.) (Bostrychid).....	210
Euthyrhinus meditabundas Fabr. (Curculionid.)..	197
Hippodamia convergens Guer. (Coccinellid.)....	196
Hippodamia 5-signata (Kby.) (Coccinellid.).....	196
Laemosaceus sp. (Curculionid.).....	210
Lycus brunneus (Lycid.).....	210
Syagrius fulvitaris Pasc. (Curculionid.).....	211
Trogodendron fasciculatum Schreibers (Clrid.).....	197, 208, 210
Xylopsocus gibbicollis (Bostrychid.).....	210

Diptera

Ceratitis capitata Wied (Trypetid.).....	205
Dacus sp. (Trypetid.).....	204
Dacus ferrugineus Fabr. (Trypetid.).....	205
Dacus laticaudus Hardy. (Trypetid.).....	204, 205
Dacus tryoni Cam. (Trypetid.).....	204

Homoptera

Brevicoryne brassicae (Aphid.).....	195
Mysus persicae (Sulz.) (Aphid.).....	195
Rhopalosiphum pseudobrassicae (Davis) (Aphid.).....	195

Lepidoptera

Agrotis sp. (Noctuid.).....	201
Anthela ocellata Walk. (Lymantriid.).....	200
Antheraea eucalypti Scott (Saturnid.).....	200
Delias argenthona Fabr. (Pierid.).....	200
Ephestia eluttella Hueb. (Phycitid.).....	205
Ephestia kuehniella Zell. (Phycitid.).....	205
Galleria mellonella Linn. (Galleriid.).....	205
Grapholitha molesta Busck. (Olethreutid.).....	196
Heliothis armigera Hubn. (Noctuid.).....	201, 202
Leucania unipuncta Haworth (Noctuid.).....	201
Ogyris genoveve How. (Lycaenid.).....	201
Pheressaces cynoptera Lowes (Noctuid.).....	202
Phagmatiphila truncata Walk. (Noctuid.).....	201
Pieris brassicae Linn. (Pierid.).....	201
Pieris rapae Linn. (Pierid.).....	201
Plodia interpunctella Hubb. (Phycitid.).....	205
Plusia sp.....	201
Teara tristis (Lewin) (Notodontid.).....	202
Thalpocharis coccophaga (Noctuid.).....	206
Theretra oldenlandiae fumata Walk. (Sphingid.)..	202
Thyridopteryx herrichi West. (Psychid.).....	202
Tortrix postvittana Walk. (Tortricid.).....	198, 201
Utsthesia pulchella Linn. (Arctiid.).....	201